



LETTER OF TRANSMITTAL

Date: February 15, 2008

To: Matthew Ohl
USEPA Region 5
77 West Jackson Boulevard
Mail Code: SR-6J
Chicago, IL 60604

cc: Bruce Hamilton – IDEM
Tim Harrison / Catherine Schripsema – CH2M HILL
N.W. Bernstein – Trustee
W.C. Blanton – Trustee
Kieran Hosey – HIS Constructors
Ron Hutchens / John Imse / Stan Popelar – ENVIRON International Corporation

Re: Revised HASP and SWWP Plans
ECC, Zionsville, Indiana

Enclosed is the HIS Constructors' revised HASP, dated February 1, and the Revised SWPP Plan, dated February 13, 2008. The modifications to these plans, which we discussed during the conference call held on Friday, February 1, 2008, have been incorporated into the documents.

If you have any questions, please contact me directly.

Enclosures – 2

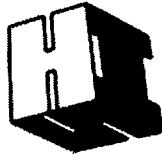
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From: Stan Popelar/robbie

Project No. 21-6585M

If enclosures are not as noted, please notify us immediately.

CONTRACTORS HEALTH AND SAFETY PLAN



**ENVIRO-CHEM SUPERFUND SITE
ATTACHMENT Z-1 REMEDY
985 SOUTH U.S. HIGHWAY 421
ZIONSVILLE, INDIANA**

Prepared for:

Environ International Corporation
740 Waukegan Road, Suite 401
Deerfield, IL 60015

Submitted by:

HIS Constructors, LLC.
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Indianapolis, IN 46220

February 1, 2008

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Substance Abuse Implementation Procedure

MOHC Drug Screen Authorization

I. INTRODUCTION

HIS Constructors, LLC (HIS) is contracted with Environmental Conservation and Chemical Corporation Site Trust Fund (the Trust) to provide services at the former Enviro-Chem (ECC) Superfund Site the specified augmented soil vapor extraction (SVE) system, permeable reactive gate system (PRGS), ex situ soil treatment cell (if necessary), associated earthwork, removal, testing and treatment/disposal of excavation materials, backfilling pipe trench, and other related items described within the contract documents. Typical activities may include but are not limited to erosion control, clearing and grubbing of existing vegetation, grading and soil relocation activities, removal of impacted materials, dewatering of excavations, and site restoration. Construction projects are subject to change due to unknown or unforeseen situations. This Health and Safety Plan (HASP) must, by virtue of the dynamics of the project, also be dynamic and subject to appropriate review and change, thus allowing it to adapt to the changing project scope. This HASP may be amended to respond to site changes with the approval of all of the following: HIS Project Manager, HIS Health and Safety Manager, HIS Site Manager, and Trust's Engineer.

1.1 Project Scope

The object of this project is to augment an existing SVE system and provide a permeable reactive gate system in attempt to attain previously established groundwater cleanup standards. Materials excavated for the SVE system will be analyzed for appropriate disposition. If needed an ex situ soil treatment cell will be constructed. The site will be restored in accordance with the contract documents.

1.2 Site Location

The ECC site is located north of the town of Zionsville in Boone County, Indiana. The site address is 985 South U.S. Highway 421, Zionsville, Indiana. The area is primarily agricultural but does contain some commercial and industrial operations.

1.3 Site History

The Enviro-Chem facility was a fuel and chemical recycling facility with chemicals stored on the site in drums. This storage resulted in environmental impact to the area and was added to the national priority list (NPL). Site investigations were conducted between 1987 and 1990 and determined that the primary significant chemical constituents are chlorinated volatile organic compounds (VOCs). Remedial activities were conducted from 1997 and 2000 including excavation of contaminated materials and the installation of an SVE system.

1.4 Site Plan

See Appendix A for the Site Plan.

II. Project Description:

Initial project activities include site preparation activities, installing erosion control measures, i.e., silt fence, diversion berms, and etc. Site remedial activities include installation of an augmented SVE system with associated system upgrades and improvements. The installation of the designed PRGS system in accordance with the design specifications provided. Additionally, the excavated soils will be evaluated for disposition as to ex situ treatment, off-site disposal, burial on site, or use as a vegetative layer. Specified activities associated with this remediation will be completed in accordance with the contract documents.

2.1 Project / Site Organization

The following identifies the project organization and responsibilities:

Trust's Engineer:	Ronald Hutchens,
Oversight (Environmental):	Catherine Schrimsema, CH ₂ M Hill.
Operations Manager:	Brian Keeney, HIS Constructors, LLC
General Superintendent:	Jim Hawkins, HIS Constructors, LLC
Project/QAQC Manager:	Kieran Hosey, HIS Constructors, LLC (on-site)
Site Superintendent:	Fred Arvin, HIS Constructors, LLC (on-site)
Health & Safety Manager:	Ralph Hospodarsky, HIS Constructors, LLC
HIS Site Safety Officer:	Fred Arvin, HIS Constructors, LLC (on-site)

2.2 Organizational Responsibilities

Operations Manager

The Operations Manager's primary function is to oversee the management activities at the site to insuring that the scope of services required per the Contract is met. Additionally, the project manager manages the overall site activities in accordance with the Work Plan and this Health and Safety Plan (HASP) insuring these activities are carried out to the satisfaction of all the appropriate parties.

The project manager, if necessary, can modify the site-specific HASP, with concurrence with the Health and Safety Manager, to accommodate on-site changes that may effect safety.

General Superintendent

The General Superintendent is responsible for the overall daily construction activities including resource management, HASP compliance and maintaining the construction schedule. The General Superintendent is a designated competent person with respect to soils excavation and trenching. Additionally, the General Superintendent identifies changes in site conditions and notifies the appropriate personnel of these changes. The General Superintendent supports the site superintendent in accomplishing the required tasks in a timely and safe manner. Additionally, the General Superintendent conducts site safety audits to insure compliance with this HASP.

Project/QAQC Manager

The Project/QAQC Manager is responsible for insuring that the requirements of the contract documents are met and documenting that all aspects of the project requirements are followed. The Project/QAQC Manager communicates with the Site Superintendent daily to insure that the project design is followed and maintains communication with oversight regarding compliance any compliance issues.

Site Superintendent

The Site Superintendent is responsible for the daily construction activities including site inspections, maintenance of equipment, and maintaining the optimal usage of personnel and equipment. The Site Superintendent is also designated as a competent person with respect to excavation and trenching as well as the Site Safety Officer. The Site Safety Officer (SSO) will possess current training in First Aid and CPR. The Site Superintendent/SSO shall be responsible for following this HASP and the established Health and Safety Program. The Site Superintendent supports the activities of the General Superintendent and Project Manager.

Health and Safety Manager

The Health and Safety Manager is responsible for ensuring that this Health and Safety Plan ("HASP") and the specific on-site health and safety requirements, based on known or anticipated concerns are addressed and adhered to. If necessary, the Health and Safety Manager can modify the site-specific HASP to accommodate on-site changes that may affect safety. The Health and Safety Manager may visit the site during field activities to perform a site safety audit but will not be onsite throughout the entire project on a daily basis. The Site Superintendent will serve as the Site Health and Safety Officer (SSO), on a daily basis. The SSO will be fully acquainted with the required Health and Safety aspects of the project.

Field Staff

All HIS field staff is responsible for understanding and complying with all of the requirements of the HASP. Prior to anyone commencing work on the site they must read and acknowledge they understand the content and intent of the HASP. Each morning, prior to the beginning of the day's field activities, the Site Superintendent will conduct a "Daily Huddle" (using a Daily Huddle "Safety Bulletin" Form #1) safety meeting to discuss the Health and Safety Plan and the task-specific health and

safety concerns that will be encountered that day. During this meeting, site safety concerns and questions, by the field forces, can be directed to the Site Superintendent, or other team members that may be present at the meeting. Each worker will acknowledge their participation and understanding of the Health and Safety Plan and the Daily Huddle topic on a daily basis by signing a “Daily Huddle Form” topic sheet and acknowledgment form.

Oversight

CH₂M Hill will serve as the environmental oversight contractor for The USEPA. Representatives are identified in section 2.1 of this HASP.

Subcontractors

HIS Constructors, LLC will self-perform a many of the tasks on this project with its own forces. However, subcontractors may be utilized for various tasks such as for the following:

- Off-Site Trucking
- Bio-Polymer Usage
- Landscaping

III. Site Operations

3.1 Mobilization

HIS Constructors will mobilize equipment and personnel as soon as practicable following the receipt of the notice to proceed. Equipment and personnel utilization are based on the schedule of activities previously presented and efficient completion of the tasks being completed. All equipment will be received in good repair with lights, backup alarm, mirrors, and glass in place and operable. Work zones will be established upon arrival to prevent possible migration of contaminants to non-impacted areas of the site. HIS will provide an office trailer for storage and work activities.

3.2 Site Preparation

Site preparation consists of obtaining the necessary materials, equipment, supplies and facilities to provide for the safe and efficient work processes. This can include but is not limited to the following areas.

3.2.1 Security

Any visitor entering the site will be required to stop at the field office previously referenced. All visitors will have to sign in at the office. Persons new to the site will receive instruction regarding the health and safety aspects of the site. All visitors will be required to adhere to the health and safety requirements of the site and to provide their own safety equipment.

Perimeter security for the site is by virtue of the existing fence around the site perimeter. The perimeter security measures will be inspected weekly to ensure the condition of the security measures.

Orange construction fencing and various other temporary barriers may be utilized, in addition to the mentioned fencing, during various phases of the project. The barricades, fence and etc., will prevent the unauthorized intrusion of vehicles and personnel into work areas. Open excavation areas may be fenced or barricaded during non-work hours to prevent unwanted intrusions.

3.2.2 Sanitation

HIS will provide appropriate sanitary facilities at the construction site for site personnel. The sanitary facilities will be in the form of portolets with weekly maintenance service provided for optimal use. Potable water via a drinking cooler will be available at the field office and in HIS site vehicles.

All HIS work areas will be kept clean and free of trash and debris. At the end of every shift, all work areas will be assessed to insure the work areas are free of debris. HIS will periodically police the work areas for debris, including paper products, cans, etc. Hand and face washing facilities (decontamination areas) will be periodically cleaned and inspected for cleanliness and wash and rinse water will be changed periodically. At a minimum, weekly refuse bags and containers will be used to discard disposable clothing. All contaminated clothing shall be disposed of in an approved manner.

Housekeeping is a vital part of this construction project. All materials stockpiled on site will be maintained in an orderly fashion to prevent slip trip and fall hazards. Remnants of used materials will not be allowed to accumulate with disposal on a regular basis.

3.2.3 Environmental Controls

Various environmental influences can be encountered during this construction project. Dust can be expected during any construction project and must be controlled. HIS will make every effort to minimize dust throughout the project. HIS will visually monitor the dust control program continually. The observance of any visible dust that could potentially leave the construction site or interferes with work activities will result in the application of water to the dust source. An agreed upon water source will be utilized to apply the water to insure dust is controlled on roadways and work areas.

Erosion control will consist of the installation of silt fence in the areas designated by the erosion control plan. Additionally, erosion controls will be set around storm water inlet structures. Silt fences will be inspected, at a

minimum, weekly, after storms events and as might be needed to provide optimal erosion control.

Straw dams and sediment filters will be installed as required to prevent sediment from leaving the work area. The straw bales will be inspected and maintained on the same sequence as the silt fence. Deteriorating or damaged check dams or sediment filters will be repaired or replaced as needed.

Storm water intrusion into excavations will be minimized through the use of diversion berms placed around excavation areas, at the discretion of HIS. The diversion berms will be constructed of excavated materials or straw, and will be strategically placed to direct the storm water away from the excavation area. The berms will have sufficient cross section to prevent washout of the berm. The berms will be inspected in the same manner as the silt fence and dams.

3.2.4 Clearing and Grubbing

Clearing and grubbing is will be accomplished in accordance with the plans and specifications.

IV. Excavation / Trenching

Excavation and trenching will occur as part of the pipe installation, including the removal of impacted soil, and debris. Prior to any excavation activities the site superintendent will contact "Indiana Underground Plant Protection Services"(1-800-382-5544) to locate any existing utilities located within the work areas. This notification will occur a minimum of 48 hours prior to any excavation activities commencing. Excavation and trenching activities will be accomplished in accordance with 29CFR Part 1926 Subpart P and HIS's standard operating procedures (SOPs). Additionally, the excavation activities within the exclusion zone will be accomplished in accordance with 29 CFR 1910.120 until a suitable barrier is present between any hazardous waste and the site personnel.

HIS's general superintendent and HIS's site superintendent are the designated competent persons for excavation and trenching. They will conduct, at a minimum, daily inspections of the excavation areas. Changes in the excavation area soils will result in a re-evaluation of the excavation procedures and methods. The designated competent person must re-inspect the excavation and modify the procedures and processes in accordance with appropriate safety practices for the soil type being encountered. The designated competent person shall complete an excavation log every time a re-inspection occurs and conditions have changed.

HIS will provided PPE and environmental monitoring as described later in this HASP. All persons working with in this area will have received appropriate training in accordance with 29 CFR 1910.120. (40 Hour HAZWOPER training and appropriate 8 hour refresher training) Entry into the exclusion zone will be through

the support zone, contamination reduction zone and then into the exclusion zone. Equipment will additionally, follow the same entry path.

Soil removal may include boring and drilling in addition to the use of shovels and excavating equipment. Excavated materials will be managed in accordance with the contract documents and in accordance with SOPs and appropriate regulations.

HIS does not anticipate any personnel entering an open excavation. If the need arises for personnel to enter the open excavation and the situation can not be avoided, work will be stopped and HIS will work with onsite personnel and the Health and Safety Manager to develop and coordinate a confined space entry program.

V. Utilities

All existing drainage structures and utilities will remain in place and operable during this construction project unless prior arrangements have been made and such activities are in accordance with the contract documents. Utilities shall be located by hand or other techniques that will not cause damage to the utilities. Additionally any utilities that are undermined by the excavation/trench shall be adequately supported to prevent damage or breakage. Support of existing utilities will be in accordance with the requirements of the subject utility.

VI. Site Excavation and Remediation

Excavation will proceed at the direction of the competent person on site and to accomplish the project scope in the most efficient and safe manner available. HIS will excavate the contaminated/impacted material from the areas identified in the contract documents. These impacted materials will be staged in accordance with the contract documents and material management documents for evaluation and disposition. Subsurface structures encountered, foundations, footers, and other structures will be sized for appropriate handling and disposal. Non-impacted material may be left, provided this doesn't impact the remedial/construction activities.

VII. Site Restoration

Upon completion of the specified remedial activities and the installation of the specified items the excavation areas will be backfilled and compacted in accordance with the contract documents. Grading and seeding will be accomplished per the contract requirements.

VIII. Demobilization

Demobilization of equipment and personnel is an ongoing process as different tasks requires a multitude of personnel and equipment. Any equipment that has completed the tasks for which it suited will be demobilized from the construction site. Any equipment scheduled to leave the site will be inspected by the site superintendent and cleaned/decontaminated in accordance with the required procedures detailed herein.

Equipment that was utilized within and exclusion area, will have passed through the contamination reduction zone and been decontaminated in accordance with the decontamination procedures contained in section 4.4.2 of this Health and Safety Plan. Decontamination procedure will be monitored by the SSO. Equipment decontamination will be documented by the SSO and the Site Superintendent. A decontamination log will be completed prior to that equipment leaving the site (Appendix E).

IX. Site Specific Safety Requirements

9.1 Hazard Analysis

Specific activities are specified with this construction project and with each activity potential hazards are associated. Each activity must be analyzed for its associated potential hazard. Once the specific activity hazards are identified methods to minimize or eliminate the risk can be implemented. Site activities will be conducted in accordance with the HIS's Health and Safety Program, this shall be the responsibility of the SSO and Site Superintendent.

TASK	HAZARD	ACTION	PPE
All Tasks	Heat Stress	Drink Plenty of Water, Take Adequate Breaks	Level C*/ Level D
All Tasks	Cold Stress	Dress in Layers, Remove Layers as Required	Level C*/ Level D
All Tasks	Insects, Bees, Wasps	Be Aware of Activity in Work Area	Level C*/ Level D
All Tasks	Slip, Trip, and Falls	Remove Snow and Ice, Clear Pathways, Housekeeping	Level C*/ Level D
Site Supervision	Slip, Trip, and Fall	Housekeeping, Clear Pathways	Level C*/ Level D
Site Supervision	Equipment/Vehicle Operation	Only Authorized Personnel.	Level C*/ Level D
Excavation	Soil Stability	Competent Person Inspection and Cave-in or soil retention methods used	Level C*/ Level D
Excavation	Heavy Equipment	Qualified Operator	Level C*/ Level D
Excavation	Slip Trip and Fall	Only Necessary People At Work Area, House keeping maintained	Level C*/ Level D
Excavation	Dirt Collapse	No Personnel in Trench or Bench/Slope; all personnel maintain 2 foot clearance around excavation	Level C*/ Level D
Excavation	Moving Equipment	Qualified Operator, Backup Alarms, Operator Communication, Hi-Visibility Wear	Level C*/ Level D
Dewatering Excavation	Slip Trip and Fall	Only Necessary People At Work Area, House keeping maintained	Level C*/ Level D
Dewatering Excavation	Chemical Contamination and Physical Hazards	Dust Control, Water Area, and Ambient Air Monitoring	Level C*/ Level D Modified

Dewatering Excavation	Dirt Collapse	No Personnel in or around Trench or Bench/Slope without soil retention methods utilized	Level C*/ Level D
Dewatering Excavation	Noise	Hearing Protection and Hi-Visibility Wear	Level C*/ Level D
Dewatering Excavation	Lifting and Back Strain	Proper Lifting Techniques, Use Equipment To Move Pumps and Hoses	Level C*/ Level D
Electric Wiring	Electric Arc, Shock	Lock Out/ Tag Out, Qualified Electrician, Monitor for Explosive Atmospher	Level C*/ Level D
Electrical Wiring	Electric Shock	Lock Out/Tag Out, Qualified Electrician	Level C*/ Level D
Breaking Existing Piping	Pressure and Water	Qualified Persons performing the operation, Lock Out/Tag Out	Level C*/ Level D
Hauling Materials	Trucks	Qualified Operator, Backup Alarms, Communication with Operator, Spotter	Level C*/ Level D
Excavation and Grading	Moving Equipment	Qualified Operator, Backup Alarms, Communication with Operator	Level C*/ Level D Modified
Excavation and Staging of Impacted Matl.	Chemical Contamination and Physical Hazards	Dust Control, Water Area, and Ambient Air Monitoring	Level C*/ Level D Modified
Excavation and Loading Impacted Matl.	Heavy Equipment	Qualified Operator, Backup Alarms, Communication with Operator	Level C*/ Level D Modified
Excavation, Loading, and Trucking	Noise	Hearing Protection and Hi-Visibility Wear	Level C*/ Level D Modified
Lifting Heavy Pipe, Manholes, Components	Overhead Loads	Critical Lift Plan, Tag lines, Qualified Operator, High Visibility Wear	Level C*/ Level D Modified
Pipe Installation	Chemical Contamination and Physical Hazards	Qualified Operator, Backup Alarms, Operator Communication, Ambient Air Monitoring, Appropriate PPE	Level C*/ Level D Modified
Grading	Moving Equipment	Qualified Operator, Backup Alarms, Communication with Operator	Level C*/ Level D Modified
Backfill, Site Restoration	Moving Equipment	Qualified Operator, Backup Alarms, Communication with Operator	Level D
Erosion Control	Heavy Equipment	Qualified Operator, Backup Alarms, Communication with Operator	Level C*/ Level D Modified
Erosion Control	Pinch, Crush	Use Hammer Appropriately, Hold Stakes with Gloves, Hold Stakes Only to Start	Level C*/ Level D Modified

* Level C upgrade initiated due to real time air monitoring on the site, as described in section 9.2.3 of this HASP.

9.2 Hazard Control and Monitoring

Activity hazard analysis is utilized to identify the hazards associated with the various tasks that are preformed in conjunction with the project. During the course of the project the various tasks can change and as such the potential hazards may change. This Health and Safety Plan is a dynamic document and subject to adjustment as the project change.

The remedial areas identified in the contact documents contain a mixture of various surficial and subsurface materials some of which will contain hazardous substances. Due to the nature of this work activities (intrusive activities) conducted within the exclusion zone area will be accomplished in accordance with the requirements of 29 CFR 1910.120 (HAZWOPER). The remedial areas will be treated as an exclusion zone by establishing an orange construction fence barrier to prevent unauthorized entrance into the area during hazardous waste operations. The parts of this HASP associated with HAZWOPER apply only to the activities associated with hazardous waste. HAZWOPER requirements do not apply to activities accomplished after the sub-grade layer is installed or exposure monitoring has documented the absence of exposure to hazardous components and the site is downgraded in accordance with this HASP.

9.2.1 Work Zones

The tasks associated with this project and the classification of hazardous waste areas require that appropriate work zones be established. The work zones provide for the segregation of the activities and the associated hazards. In accordance with 29 CFR 1910.10, site control will be established through the use of work zones. Parts of the site where no hazardous substance risks are present will be the Support Zone. The hazardous waste area is the Exclusion Zone and is separated from the rest of the site by an orange construction fence. Entry into the hazardous waste area is accomplished through the use of a special corridor (Contamination Reduction Zone) where equipment and personnel are decontaminated prior to leaving the hazardous waste area. Eating of food, consumption of water or other appropriate liquids may only be accomplished in the support zone and in designated areas. Smoking will not be permitted except in areas designated by the site safety officer.

Support Zone: The Support Zone, when properly staged, provides the basis of operation for the other work zones previously identified. Due to its interface with the surrounding community the Support Zone is designed to be contaminant free, therefore PPE are not required.

Contamination Reduction Zone: The Contamination Reduction Zone (CRZ) is the designated area where contamination present on the workers and equipment is removed. For the purposes of this project the personnel CRZ will consist of boot wash, face and hand wash with trash containers to receive

the tyvek and other disposable PPE. This method of decontamination will only be utilized until the impacted soils are removed and clean backfill soils are in place, when Level D PPE is utilized, thereby preventing migration of the constituents of concern and protecting the surrounding environment. Contaminated PPE will be contained in plastic garbage bags once they are removed. The garbage bags will remain onsite and stored in approved containers until disposal authorization can be secured. Disposal of any contaminated materials, including PPE, trash and other materials not suitable for decontamination, will be in accordance with the project requirements. Due to the usage of disposable outer garments, onsite showering and washing facilities will not be utilized.

A decontamination pad will be established at the CRZ and will consist of impermeable membrane placed in the excavation area. The decontamination pad will contain any water generated by the equipment decontamination. Wooden plywood materials will be placed in the plastic lined pit to prevent damage to that liner and support the heavy equipment driven into the pad for dry decontamination. Prior to entering the decontamination area the tracks/tires will first be decontaminated by the removal of any gross contaminated material. Additionally, the bucket or earth-moving portion of the equipment will have the gross contamination removed prior to entering the decontamination pad. Once the gross contamination is removed the equipment will enter the decontamination pad for decontamination. Dry decontamination will be utilized when practicable and when necessary the equipment will be decontaminated using a high-pressure washer. At the completion of the decontamination process each piece of equipment will be inspected by the owners' designated Quality Assurance Officer or his representative. After a successful inspection and appropriate documentation the equipment will exit the CRZ. Water generated by the decontamination process will be pumped to an onsite storage tank pending appropriate characterization and disposal.

Exclusion Zone: This is the portion of the property where the HAZWOPER work activities will occur. It includes the area inside the perimeter exclusion zone fencing. Activities in this area will include excavation, pipe installation, and backfilling, as well as, possible secondary activities. PPE in this workzone is anticipated to be Level D. Entry into the exclusion zone will require two persons to enter the area with appropriate backup for monitoring and emergency situations. The buddy system must be utilized in the exclusion zone whenever intrusive activities are being conducted and potential exposure exists. Ambient Air monitoring will be accomplished when intrusive and grading work begins. Air samples will be collected from the breathing zone of workers in the exclusion zone. Additionally, down wind and up wind air samples will be collected at the perimeter of the exclusion zone. HIS Constructors will conduct ambient air monitoring whenever intrusive activities are under way. The action levels and appropriate response to the detected levels are identified in the contract documents and this HASP. Level

D protection will consist of a minimum of hardhat, safety boot, safety glasses, and leather gloves. Chemical resistant coveralls, gloves, and boots are required whenever contact with impacted soils or materials is possible. Additional levels of protections may be required and are identified in this HASP.

9.2.2 Personal Protective Equipment (PPE)

Protective Equipment Needed

- Work Uniform
- Leather gloves
- Chemical resistant gloves during level C and when contact with impacted materials and soils
- Steel Toed Shoes/Boots
- Chemical resistant over boot during level C and when contact with impacted materials and soils
- Safety Glasses
- Hard Hat
- Flame Resistant Coverall
- Tyvek Coveralls (required during level C and when contact with impacted materials and soils; optional at level D)
- Full Face Air Purifying Respirator with Chemical Cartridge and HEPA Filter during level C

Protective Equipment Levels

The following is a brief description of the personal protective equipment, which may be required during various phases of the project. Although there is some flexibility to custom fit the actual items of protective equipment to the real-life situation, in general the levels of protection are defined as follows:

Level A – The highest level of protection used when:

1. Unknown chemicals are involved and there is a high risk for chemical release.
2. Chemical concentrations are known to be above the safe levels (IDLH atmospheres).
3. Extremely hazardous substances are present or suspected.
4. Chemicals and/or vapor and mists are destructive to tissue.
5. Oxygen deficient atmospheres or confined space conditions.

Level B – The second highest level of protection used when:

1. Concentrations of chemicals in the air are IDLH or above the protection factor provided by an APR with full-face mask.
2. Oxygen deficient atmospheres or confined space conditions.
3. Vapor absorption or contact with skin not critical.

Level C – An intermediate level of chemical protection used when:

1. Air concentrations of chemicals are potentially above or known to be above ACGIH TWA – TLVs and APR will provide adequate protection.
2. Non-IDLH atmospheres.
3. Chemicals are not destructive to the skin.

Level D – Minimum level of chemical protection used when:

1. No concentrations of chemicals in excess of ACGIH TWA – TLVs.
2. No hazardous effect from skin or inhalation.
3. Modified D PPE shall be considered chemical gloves and boots whenever impacted materials are exposed but vapors and environmental monitoring fails to detect any exposures.

Minimum OSHA – Recommended Requirements for Worker Protective Levels

Protection Level	Equipment
Level A	Pressure-demand full-face SCBA or pressure-demand air-supplied respirator with escape SCBA.
	Fully encapsulating, chemical-resistant suit. (Tyvek or equivalent)
	Inner and outer chemical-resistant gloves. (Latex/Nitrile)
	Chemical-resistant steel toed safety boots.
	Hardhat.
Level B	Pressure-demand, full-face SCBA or pressure-demand air-supplied respirator with escape SCBA.
	Chemical-resistant clothing (overalls and long-sleeved jacket; hooded one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit. (Tyvek equivalent)
	Inner and outer chemical-resistant gloves. (Latex/Nitrile)
	Chemical-resistant steel toed safety boots.
	Hardhat.
Level C	Full-faced, air-purifying, canister-equipped respirator.
	Chemical-resistant clothing (overalls and long-sleeve jacket; hooded, one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit). (Tyvek equivalent)
	Inner and outer chemical-resistant gloves. (Latex/Nitrile)

	Chemical-resistant boots over steel-toed safety boot. *
	Hardhat.
	Safety glasses, goggles, or face shield as necessary.
Level D	Steel-toed safety boots.
	Safety glasses or splash goggles.
	Hardhat.
	Latex or Nitrile Gloves as necessary.
	Flame Resistant uniform or coveralls.
	Coveralls (Modified Level D) (Tyvek or equivalent)

* Not required for ground water sampling activities during cold weather when potential for frostbite exist.

9.2.3 Environmental Monitoring

Dust can be expected during any construction project and must be controlled. HIS will make every effort to minimize dust throughout the project. HIS will monitor for dust control by visually observation. The observance of any visible dust that could potentially leave the construction site or interferes with work activities will result in the application of water to the dust source. A water source will be utilized to apply the water to insure dust is controlled on roadways and work areas.

Additional, environmental surveillance shall be conducted within the remedial site during excavation and grading activities. HIS will conduct the surveillance monitoring utilizing the equipment identified below. HIS will utilize a PID to monitor the breathing zone during the excavation and loading of materials. Monitoring will be accomplished prior to any work commencing and periodically during the remedial activities. Any sustained indication of photoionizable vapors (15 minutes) PID reading of 2.5ppm, above background, will require the use of color-o-metric tubes for Vinyl Chloride, Trichloroethane, and Benzene (Drager Tubes or equal). Any constituent of concern that can't be detected by the PID will be monitored using color-o-metric tubes. Any exposure greater then the PEL for either of these chemicals will result in an upgrade of the PPE. Protections levels will be dependent on the levels encountered. Sustained PID reading > 5ppm, above background, will result in up grading of the PPE protection level from Level D to Level C. A sustained PID reading of 10ppm will result in work stoppage and personnel leaving the area to re-evaluate methods to control exposure. HIS will additionally monitor Oxygen, Hydrogen Sulfide, Carbon Monoxide, and LEL at the work area. LEL levels exceeding 10 %, O₂ levels outside the range of 19.5%-23.5%, H₂S greater then 10 ppm, or CO levels greater then 25 PPM will result in work being stopped to evaluate the cause of the variance.

All air monitors shall be calibrated in accordance with the manufacturer's instructions. Calibration will be done on a daily basis and documented in the calibration log contained in Appendix E.

Air monitoring devices will be utilized at the site and include:

Combustible Gas Indicator (Industrial Scientific M-40 or equal)
Photo-ionization Detector (PID) 10.6 eV lamp and 11.7 eV Lamp – PhotoVac or equal
Hand Pump and Color-o-metric Tubes for Benzene, Trichloroethane and Vinyl Chloride (Dräger or Equal)

Site monitoring will take place in the beginning of the job and periodically throughout the job:

- Prior to the beginning of every shift
- Continuously throughout the shift during excavation within the impacted soils area until the sub-grade is installed and exposure to hazardous substances is no longer an issue.

9.3 Substance Abuse Policy

Personnel working on site may not be under the influence of drugs or controlled substances or intoxicating beverages. Each person working on site should read, understand, and conform to all policies outlined in Appendix F. Each employee will be required to sign the Substance Abuse Policy before performing any activities on site.

X. Medical Monitoring

All HIS employees involved in hazardous waste operations are included in HIS's Medical Surveillance program HIS's Substance Abuse Program and the Substance Abuse Program represented in Appendix F of this HASP. This program involves medical monitoring prior to employment, on an annual basis and at the termination of employment. Details of HIS's Medical Surveillance Program is outlined below. If additional medical surveillance procedures are necessary for this project, they are outlined below as well and in Appendix F of this HASP.

Medical Monitoring Plan

All employees whose job requires them to:

- Enter the hazardous waste site;
- Otherwise come in contact with hazardous materials (e.g., contaminated equipment, laboratory samples);
- Perform physical activities more strenuous than normal; must be included in a medical surveillance program. This program should involve medical monitoring prior to

employment, on an annual basis and at termination of employment as specified by 29 CFR 1910.134 and 29 CFR 1910.120.

All employees involved in hazardous waste activities must be medically fit to wear respiratory protection as required in OSHA Respiratory Protection Standard (29 CFR 1910.134) and Hazardous Waste Emergency Response Operations Standard (HAZWOPER) (29 CFR 1910.120). All on-site personnel must provide certification to assure medical fitness with OSHA respiratory protection protocol and respiratory fit testing (qualitative or quantitative).

In addition, all on-site personnel must be actively involved in a comprehensive medical surveillance program as required in HAZWOPER Standard (29 CFR 1910.120) to ensure physical capabilities.

The HIS medical surveillance program includes the following examinations:

- Physical Examination – During this physical examination, the physician considers the individual's capability to wear respiratory protection. Pulmonary function, cardiovascular status and weight carrying capacities are evaluated. Ability to detect odors is also to be included. A licensed Occupational Physician performs the examination. The physician provides a written certification that each employee is medically fit to wear respiratory protection. Additional testing protocol include:
- Audiogram
- Wellness blood profile – including complete blood count (CBC), SMAC-24, coronary risk profile.
- Spirometry
- Respirator certification (by examining physician)
- Titmus and Snellen Vision Screen
- Methemoglobin
- Microurinalysis
- Physician's written medical opinion

Special Medical Considerations

- Certain prescription drugs may affect an individual's ability to work in temperature extreme conditions. The physician should note special limited capabilities under these conditions.
- The purpose of the site Health and Safety Plan is to prevent worker exposure. Biological monitoring activities measure the amount of a specific chemical or its metabolite, which is excreted from the body. Examples include phenol monitoring in urine for benzene exposures, lead in the blood, chlorinated hydrocarbon solvents in exhaled breath, etc.
- Air monitoring will be completed in accordance with section 9.2 of this HASP

- Due to work proposed at the site concentrations of contaminants, additional biological monitoring parameters, beyond the comprehensive medical surveillance program, should not be necessary.
- Substance Abuse Testing in accordance with the Substance Abuse Policy contained in Appendix F of this HASP is required of all HIS employees and subcontractors utilized by HIS. All HIS personnel and HIS provided subcontractors will have been screened for substances identified in the substance abuse policy within the previous 12 months and tested negative. The procedure for implementing this policy is provided in Appendix F of this HASP.

XI. Site Entry

A daily attendance log will be maintained at the site and all persons entering the construction area will be required to register. The site superintendent and the SSO will monitor any personnel entering the site. All visitors must sign the log and receive a health and safety indoctrination, which will require a review of this Health and Safety Plan. All persons entering the construction site must abide by the HASP and provide all PPE needed by them for site entry.

XII. Decontamination

12.1 Personnel Decontamination

Personnel leaving the workzone (Exclusion Zone) will undergo the following decontamination procedures, based on the level of PPE required on this project:

- Level A – Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, suit/safety hat removal, SCBA backpack removal, inner glove removal, inner clothing removal, field wash, redress.
- Level B – Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, safety boot removal, SCBA backpack/airline removal, facepiece removal, inner glove removal, inner clothing removal, field wash, redress.
- Level C – Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal, safety boot removal, splash suit removal, facepiece removal, inner glove removal, inner clothing removal, field wash, redress.
- Level D – Segregated equipment drop, Tyvek containerization.

The SSO shall monitor the decontamination area for compliance with the HASP.

12.2 Equipment Decontamination

Equipment and non-disposable materials that come into contact with the impacted material (e.g., excavator tracks) will be decontaminated as follows:

- Earthen materials will be scraped and removed from the equipment.
- Visual clean will be the benchmark for decontaminated equipment.
- Complete Decontamination Log

Soils generated during the decontamination process will be properly transported and disposed with other impacted soils. Following the initial site grading and the placement of the sub-grade further decontamination will not be needed unless work activities are intrusive into the landfill.

XIII Emergency Response / Contingency Plan

13.1 Pre-Emergency Planning

Prior to the start of field activities, the Site Superintendent, and/or the Health and Safety Manager will perform the following pre-planning tasks:

- Locate and inspect onsite communications equipment.
- Identify any chemical, safety, or biological hazards.
- Validate and post emergency telephone numbers and a map of the route to designated hospital.
- Inventory site safety equipment and supplies and post location.
- Review emergency response plan for any necessary changes due to specific site conditions.
- Drive the planned route to the designated hospital.
- Identify and designate a specific vehicle as the emergency vehicle.
- Review and post names of site personnel that are first aid and CPR trained.
- Verify telephone numbers and key contacts of local emergency service providers.
- Position air horns at strategic locations to alert site personnel of emergencies.
- Brief and train site personnel on the emergency response plan.

13.2 Emergency Medical Assistance and First Aid Equipment

Prior to the start of field activities, the Project Manager, General Superintendent and SSO will discuss the emergency procedures to be used onsite with all personnel. On-site personnel will use the following standard emergency procedures. The Project Manager and General Superintendent shall be notified of any on-site emergencies and will be responsible for

ensuring appropriate procedures are followed. Notification of the emergency shall be accomplished by the use of phone, radio, or air horn as appropriate.

- A. Personal Injury: Upon notification of an injury, all site personnel will lend assistance to remove the injured from the work area, if necessary. The SSO will determine the extent of injury and determine first aid measures necessary. Contact should be made for an ambulance to transport injured to a medical facility (if required). If the injured person is contaminated with hazardous materials, decontamination will take place to the extent possible. If the cause of the injury does not affect the performance of the other site personnel, normal operations may resume. If there is a risk to others, all site personnel will move from the work area until further instruction is given. Activities will cease until the risk is removed or reduced.
- B. Personal Protective Equipment Failure: If a site worker should experience a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the working area. Re-entry shall not be permitted until the equipment has been repaired or replaced.
- C. Other Equipment Failure: If any of the equipment on-site fails to operate properly, the Project Manager and General Superintendent will be notified. The Project Manager and General Superintendent will determine the effect of this failure on continuing operations. If the failure affects the safety of personnel or prevents completion of the work plan tasks, all personnel will leave the area until the situation is evaluated and the appropriate actions performed.
- D. Fire/Explosion: Upon notification of a serious fire or explosion, the local fire department will be contacted at once. A serious fire is considered to be one that is beyond the incipient stage. All personnel shall move to a safe distance from the involved area. The Site Superintendent or his designee shall direct fire equipment arriving at the scene to the appropriate area. Personnel will attempt to extinguish small or incipient stage fires when trained to do so.
- E. Spills or Leaks: In the event of a spill or a leak, employees will:
 - 1) Locate the source of the spillage and stop the flow if it can be done safely.
 - 2) Begin containment and recovery of the spilled materials.
 - 3) Arrange for clean up of the area.
- F. Weather Emergencies: In the event of heavy weather, the Site Superintendent or a SSO will oversee the securing of the site, materials and equipment in order to prevent the loss or migration of hazardous materials from the site and to prevent public access to the site.
- G. Evacuation Routes: Evacuation should be conducted immediately, without regard for equipment, under conditions of extreme emergency. Personnel should proceed immediately. Evacuation Routes will be established at the time site activities commence and will be consistent with previously identified evacuation routes.
- H. In All Situations when an on-site emergency results in evacuation, personnel shall not re-enter until:
 - 1) The conditions resulting in the emergency have been corrected.

- 2) The hazards have been reassessed.
- 3) The Health and Safety Plan has been reviewed.
- 4) Site personnel have been briefed on any changes in the Health and Safety Plan.

I. General Chemical First Aid Procedures:

1) Inhalation

- a) Remove victim to fresh air.
- b) Give artificial respiration if the person is not breathing and seek medical attention.

NOTE: Do not enter confined space or spill area without proper protection.

2) Eye Contact

- a) Flush immediately with large amounts of water for at least 15 minutes, while holding eyelids open.
- b) Get medical attention promptly after flushing eyes with water.

NOTE: Flushing for 30 minutes is recommended if contact with strong alkalis occur (caustic soda – sodium hydroxide)

3) Skin Contact

Flush affected area with large amounts of water while removing contaminated clothing.

- a) Flush for 15 minutes if contact with concentrated chemical.
- b) If irritation persists, get medical attention.
- c) Wash contaminated clothing before reuse.

NOTE: Clean and potable water tanks will be available at all times on site for decontamination and washing.

4) Ingestion

- a) The decision whether to induce vomiting is chemical-specific
- b) Do not induce vomiting without first contacting the MSDS Poison Control Center or local emergency room for instructions. The MSDS may have specific instructions.
- c) In some cases, vomiting will cause additional damage, so the use of an antidote is sometimes appropriate.
- d) If vomiting occurs uncontrollably, keep head below hips to prevent vomit from getting into lungs.
- e) Never induce vomiting or give anything by mouth to an unconscious person.
- f) Get medical attention as soon as possible.

13.3Emergency Response Contacts

<u>Agency / Facility Name</u>	<u>Phone Number</u>	<u>Response Time (Min)</u>
Ambulance	911	TBD
Fire Department	911	TBD
Police Department	911	TBD
Hospital (Witham Memorial Hospital)	765/482-2700	TBD
USEPA Hotline	(312) 353-2000	N/A
National Response Center	800-424-8802	N/A
Chemtrec	800-424-9300	N/A
Poison Control Center	800/222-1222	N/A
Environ	847/444-9200	N/A
HIS Constructors	(317) 541-9290	N/A

13.4Emergency Equipment Available

Communications Equipment

1) Field Office Telephone

2) Mobile Phones

Location – HIS field office and company vehicles

Medical Equipment

1) First Aid Kits

Location – HIS field office and company vehicles

Fire Fighting Equipment

1) Fire Extinguishers

Location – HIS field office and company vehicles

Spill or Leak Equipment

1) Tools

2) Dry Absorbents

Location – HIS field office and company vehicles

13.5Directions to the Hospital

XIV. Standard Operating Procedures

HIS Constructors utilizes standard operating procedures for most operations. Those SOPs become part of this HASP by inference and will not be copied for insertion herein. The SOPs can be viewed as HIS's Health and Safety Manual. (2 volumes) Hazard Communication is contained within volume 2 of the Health and Safety Manual. As such it will not be discussed herein but is part of this Health and Safety Plan by inference. All personnel entering the site will be trained in accordance with

the Hazard Communication. The Site Superintendent shall maintain copies of the Health and Safety Manuals on the site and ensure compliance with the SOPs.

XV. Inspections and Record Keeping

Inspections shall be made in accordance with federal, state, and local safety regulations as well as the applicable standard operating procedure contained in the Health and Safety Manual the at is discussed in XIV of this Health and Safety Plan. Personnel working on the site will have received training in accordance with 29 CFR 1910. 120 with documents maintained on the site demonstrating such training and current refresher.

Health and Safety Plan Acknowledgement:

I have reviewed this Health and Safety Plan, which was prepared for this remedial project at the former Enviro-Chem facility in Zionsville, Indiana. I agree to abide by the requirements of this plan and any appropriate modifications that may be applicable for the safety and health of the personnel associated with the project.

Printed name and signature are required for admittance to the site:

[illegible]

APPENDIX A

Site Plan

SDMS US EPA Region V

Imagery Insert Form

Some images in this document may be illegible or unavailable in SDMS.
Please see reason(s) indicated below:

Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

Specify Type of Document(s) / Comments:

Includes ___ COLOR or RESOLUTION variations.

Unless otherwise noted, these pages are available in monochrome. The source document page(s) is more legible than the images. The original document is available for viewing at the Superfund Records Center.

Specify Type of Document(s) / Comments:

Confidential Business Information (CBI).

This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

Specify Type of Document(s) / Comments:

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Unscannable Material:

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Document is available at the EPA Region 5 Records Center.

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Appendix B
Directions to Hospital



Start: 985 S Us Highway 421
Zionsville, IN 46077-8829, US

End: Witham Memorial Hospital:
765-482-2700
2605 N Lebanon St, Lebanon, IN
46052, US

Notes:

Only text visible within note field will print.



MAPQUEST.COM

Directions

Distance

Total Est. Time: 21 minutes

Total Est. Distance: 13.04 miles



1: Start out going NORTH on US-421 toward E TAYLOR AVE / TAYLOR RD. 1.0 miles



2: Turn LEFT onto IN-32 / E IN-32. Continue to follow IN-32. 8.9 miles



3: Keep RIGHT at the fork to continue on IN-32. 0.7 miles



4: Stay STRAIGHT to go onto IN-32 / INDIANAPOLIS AVE. <0.1 miles



5: Turn LEFT onto IN-32. 0.2 miles



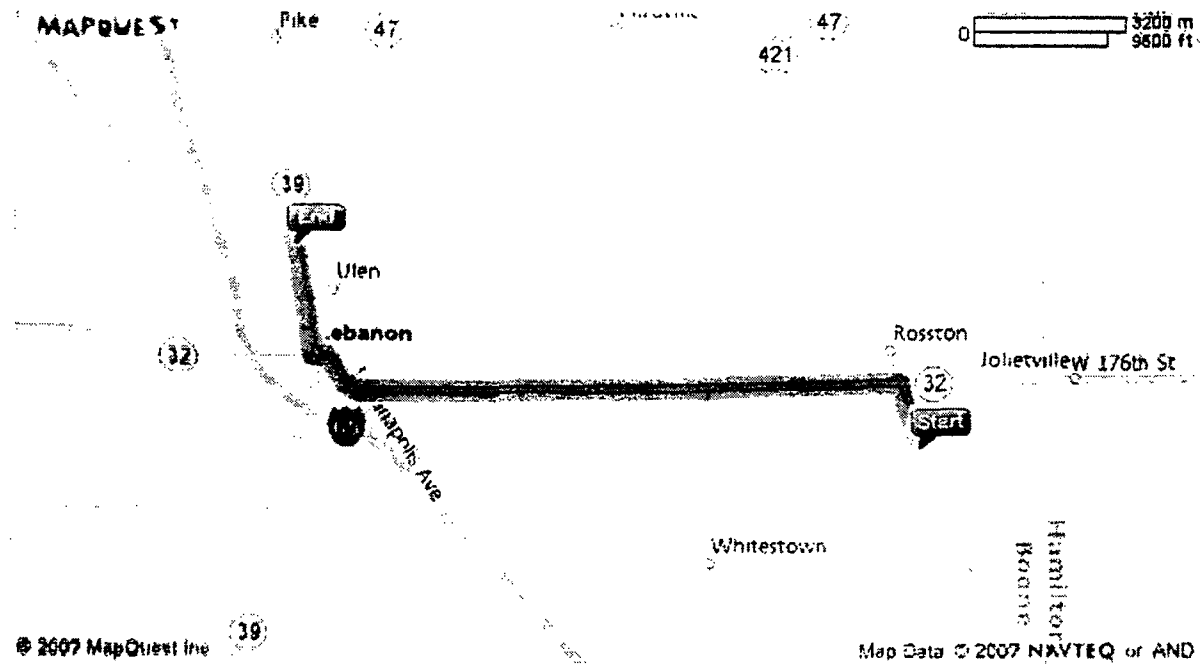
6: Turn RIGHT onto N LEBANON ST / IN-39 / N IN-39. Continue to follow IN-39 / N IN-39. 2.0 miles



7: End at **Witham Memorial Hospital:**
2605 N Lebanon St, Lebanon, IN 46052, US

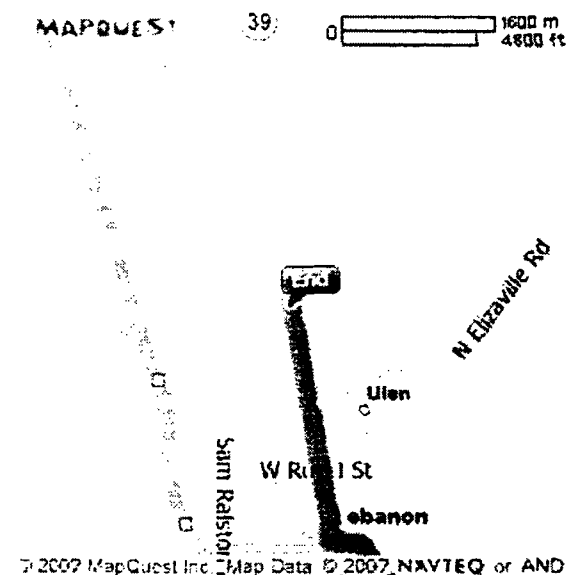
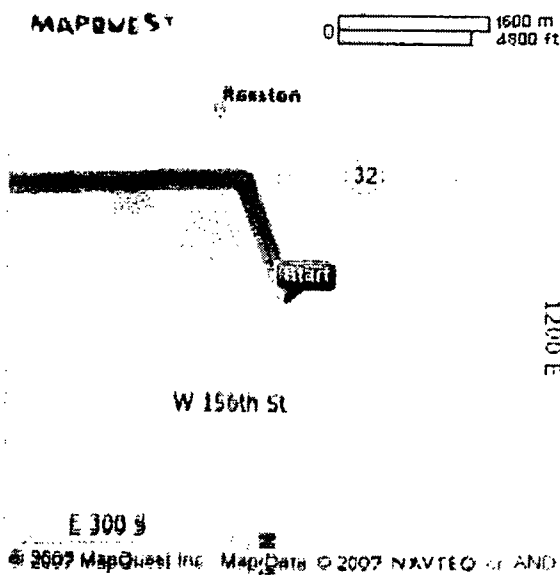
Total Est. Time: 21 minutes

Total Est. Distance: 13.04 miles



Start:
985 S Us Highway 421
 Zionsville, IN 46077-8829, US

End:
Witham Memorial Hospital:
 765-482-2700
 2605 N Lebanon St, Lebanon, IN 46052,
 US



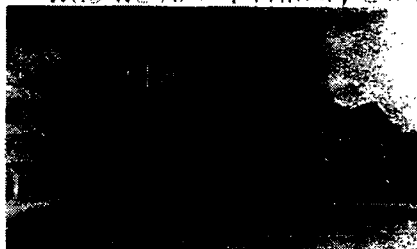
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These directions are informational only. No representation is made or warranty given as to their content, road conditions or route usability or expeditiousness. User assumes all risk of use. MapQuest and its suppliers assume no responsibility for any loss or delay resulting from such use.



[Home](#) | [Site Map](#) | [Public Notices](#) | [Contact Us](#)

[Who We Are](#) | [Primary Care](#) | [Services](#) | [Foundation](#) | [Employment](#)

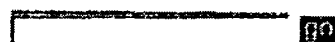


Emergency Services

Location

Witham Emergency Services is located in Witham Hospital on the Witham Health Services Medical Campus. The campus is on North Lebanon Street (State Road 39).

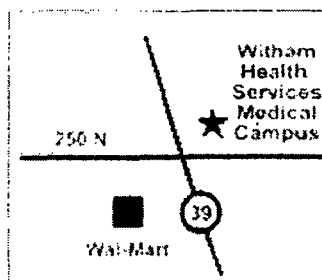
Search Witham.org



Services

Emergency Services
Physicians
Location

Allergy and Sinus Center
Cancer Institute
Eye Institute
GI Institute
Hospice Care
Maternity Center
Occupational Health
Pulmonology / Sleep Lab
Rehabilitation Services
Toxicology Laboratory
Transitions For Seniors



Witham
Emergency
Services
2605 N.
Lebanon
Street
Lebanon,
IN 46052
(765) 485-
8500

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Appendix C
Emergency Contacts

EMERGENCY INFORMATION

LOCATION:

EMERGENCY CONTACTS:

Environ (Trust's Engineer)	Ronald Hutchens	Work Phone: 847-444-9200 Mobile Phone: 847-414-7037
PRP Member:	Norman Bernsein	Work Phone: 914-358-3500 Mobile Phone: 646-413-8992
Operations Manager: (off-site)	Brian Keeney	Work Phone: 317-541-9290 Mobile Phone: 317-695-0425
General Superintendent:	Jim Hawkins	Work Phone: 317-541-9290 Mobile Phone: 317-409-2107
Site Superintendent & Health and Safety Officer:	Fred Arvin	Work Phone: 317-541-9290 Mobile Phone: 317-695-1734
Health & Safety Manager:	Ralph Hospodarsky	Work Phone: 317- 541-9290 Mobile Phone: 317-695-2992

MEDICAL EMERGENCY: 911

FIRE EMERGENCY: 911

POISON CONTROL CENTER: (800) 222-1222

EMERGENCY ALARM SYSTEM:

Fire: 3 short blasts, pause, 3 short blasts Evacuate the site if instructed to do so by the site Health & Safety Officer. If you are instructed to leave the site, a field expedient decontamination procedure will need to take place. See the Decontamination Procedures Section for more details.

Tornado: One long blast. In the event of a tornado emergency, stop work and proceed to the nearest shelter. If you do not have time to seek shelter in the designated location find shelter in a ditch, gully or low spot in the ground. Culverts offer better shelter. Avoid seeking shelter in or under vehicles, mobile homes/office trailers or near trees.

All Clear: A Loudspeaker shall be utilized to inform all personnel that the emergency situation is under control and that they are released to return to work.

EMERGENCY MUSTER AREA: HIS OFFICE TRAILER

Appendix D

Excavation /Trenching Log

HIS CONSTRUCTORS, LLC
Daily Excavation / Trenching Log

Designated Competent Person: _____

Date: _____ Time: _____ Signature: _____

Weather: _____ Project: _____

Was Utility Protection Notified? Yes _____ No _____

Soil Classification: Were visual test made: Yes _____ No _____

Were physical test made: Yes _____ No _____

If yes what type? Thumb Penetration _____ Plasticity _____

Dry Strength _____ Pocket Penetrometer _____

Type A = or >1.5 T/sq.ft : Type B > 0.5 but < 1.5 T/sq. ft. : Type C = or < 0.5 T/sq.ft.

Soil Type: Stable Rock _____ Type A _____ Type B _____ Type C _____

Purpose of Excavation / Trench: Drainage _____ Utility _____ Tank _____

Remediation _____ Pipe Installation _____ Other _____

Surface Encumbrances: Yes _____ No _____

If yes, what type? _____

Water Conditions: Wet _____ Dry _____ Submerged _____ Freely Seeping _____

Hazardous Atmosphere Exists: Yes _____ No _____

(If yes follow safe work permit procedures. Complete entry permit and monitor)

Is excavation / trenching exposed to vehicular traffic (exhaust emissions)

Yes _____ No _____

(If yes follow confined space entry procedures policy, Complete entry permit and monitor)

Excavation / Trench measurements: Depth _____ Length _____ Width _____

Is Ladder within 25 feet of all workers? Yes _____ No _____

Is excavated material staged 2 feet or more from edge of excavation/trench? Yes _____ NO _____

Are employees exposed to vehicular traffic? Yes _____ No _____

(If yes, high visibility safety vests are required)

Are other utilities protected? Yes _____ No _____

Are sewer or natural gas lines exposed? Yes _____ No _____

If yes refer to confined space entry procedures

Periodic Inspections: Yes _____ No _____

Did employees receive training in excavating? Yes _____ No _____

Signature _____ Date _____

Appendix E

Training Documentation

HIS CONSTRUCTORS SITE SAFETY ORIENTATION

I, _____ acknowledge that I have attended a Site Safety Orientation Training session conducted by _____, a H.I.S. designated representative. This training included receiving a copy of the general site safety rules. I agree to abide by these rules and I also understand that failure to follow these rules may result in disciplinary action, up to and including termination from the project.

Signature

Date

Job Title

Company Name

HIS Constructors Representative

Signature

Date

Job Title

This form must be signed and returned to the Site Safety Coordinator. A copy of this form will be kept on file in the HIS main office and job trailer.

TABLE 1

JOB SITE HEALTH AND SAFETY INSPECTION FORM

Job Site Health & Safety Inspection Form

Project: _____

Address: _____

Contractor: _____

Job Site Health & Safety Inspection Form	YES	NO
All Personnel entering the Special Soils Area or SSA Storage Area are wearing the proper ppe		
Emergency Phone Number Posted		
Safety Signs Posted		
First Aid Kit Available		
Employees Informed of Accident/Incident Procedures		
Walking/Working Surfaces are Free From Debris and Moisture		
Aisles and Stairways Adequately Lighted and Cleaned		
Materials Stored Safely		
Holes Barricaded and Perimeters Guarded		
Sanitary Facilities Adequate and Clean		
Tools Properly Grounded		
Cords, Plugs and Receptacles in Good Condition		
Fire Extinguishers Readily Available		
Employees Instructed in Fire Procedures		
Ladders and Scaffolds in Good Condition/Railings in Place		
Welding Areas Properly Shielded and Ventilated		
Welding Cables and Hoses in Good Condition		
Gas Cylinders Secured and Stored Properly		
Personal Protective Equipment Issued and in Use		
Hard Hats Required and in Use		
Equipment in Good Repair and Properly Guard		
Hazard Communication Standard Requirements Met		

Comments:

Report Filed By: _____

Date: _____

Time: _____

TABLE 2
SAMPLE TAILGATE SAFETY MEETING

Trenches - Safety Basics

Exposed trench faces that are more than five feet high must be stabilized by either shoring, sloping the face of the wall back to a stable slope or some equivalent method to prevent cave-ins.

If the trench is excavated in hard, compact soil materials more than five feet in depth, the wall must be supported. If the walls of a trench are less than five feet deep and in soft or unstable soil materials, then trench boxes, shoring, sheeting, bracing, sloping or other equivalent methods are required to prevent the trench wall from collapsing. Trench walls above five feet in height may be sloped instead of shored.

Materials used for trench boxes, sheeting, sheet piling, bracing, shoring and underpinning should be in good condition, and should be installed so that they provide support that is effective to the bottom of the trench. Timber must be sound and free from large or loose knots. Vertical planks in the bracing system should be extended to an elevation no less than one foot above the top of the trench face.

When employees are required to be in trenches that are four feet or more in depth, an adequate means of exit, such as a ladder or steps, must be provided and located so that no more than 25 feet of lateral travel is required for a person to reach the exit structure. The trench should be braced and shored during excavation and before personnel are allowed entry.

Cross braces and trench jacks should be secured in true horizontal positions and spaced vertically in order to prevent trench wall material from sliding, falling or otherwise moving into the trench. Portable trench boxes (also called sliding trench shields) or safety cages may be used to protect employees instead of shoring or bracing. When in use, these devices must be designed, constructed and maintained in a manner that will provide at least as much protection as shoring or bracing, and extended to a height of no less than six inches above the vertical face of the trench.

Also, remember to call before you dig.!!

Heat Related Illness

Heat cramps, heat exhaustion, and heat stroke are conditions caused by over exposure to heat. The heat and relative humidity both are important. If the temperature is 85 degrees and the humidity is 50% then it will affect the body as though it were 90 degrees.

Heat Cramps:

Heat cramps are the least severe. They are painful muscle spasms and usually occur in the legs or abdomen. To care for heat cramps, have the victim rest in a cool place. Give cool water to drink. Usually rest and fluids are all the person needs to recover. You may also want to lightly stretch the muscle and gently massage the area. The victim should not take salt tablets or salt water – they can make the condition worse.

Heat Exhaustion:

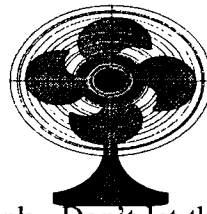
Heat exhaustion is more severe. Its signals include cool, moist, pale, or flushed skin; headache; nausea; dizziness; weakness; and exhaustion.

Heat Stroke:

Heat stroke is the least common but most severe. It most often occurs when people ignore the signals of heat exhaustion. Heat stroke develops when the body systems are overwhelmed by heat and begin to stop functioning. Heat stroke is a serious medical emergency. The signals are red, hot, dry skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing.

When you recognize a heat-related illness in its early stages you can usually reverse it.

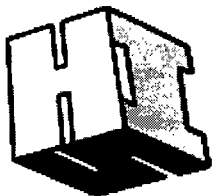
- Get the victim out of the heat.
- Loosen any tight clothing.
- Apply cool, wet clothes to the skin.
- Fan the victim.
- If the victim is conscious, give them cool water to drink. Don't let them drink too quickly – about one glass every 15 minutes.
- Let them rest in a comfortable position, and watch carefully for any changes in condition.
- The victim should not resume normal activity that day.



Call for an ambulance if the victim:

- Refuses water,
- Vomits, or
- Or starts to lose consciousness.





HIS CONSTRUCTORS, LLC DAILY SAFETY MEETING

SUBJECT: PROJECT SAFETY MEETINGS	NUMBER
	<u>PAGE 1 of 1</u>
	DATE PUBLISHED 4/20/00

Safety Topics Presented:

- ☐ PPE: Hardhat, Safety Glasses, High Visibility Vests, Safety Shoes, Gloves as necessary.,
- ☐ Chemical Hazards: Volitile Organic Compounds.
- ☐ Physical Hazards: Excavation and Trenching, Traffic, Cold Temperatures, Water in Trench
Slips Trips, and Falls
- ☐ Emergency/Evacuation Procedures: _____
- Weather: _____

Attendees (names printed):

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Meeting Conducted by:

Name Printed
070047

Job Number

Signature

Date

TABLE 3

CHEMICAL HAZARD INFORMATION / HEALTH HAZARD INFORMATION

Table 3

Chemical Hazard Information / Health Hazard Information

Contaminant	TLV	OSHA (PEL)	IDLH	Action Level	ROUTES OF ENTRY	SYMPTOMS	TARGET ORGANS
Acetone	500 PPM	1000 PPM	2500 PPM	NA	INHALATION INGESTION CONTACT	Irritate nose, eyes, headache, dizzy, CNS depression	Eyes, skin, resp system, CNS
1,1-Dichloroethene	5 PPM	none	Ca	NA	INHALATION INGESTION CONTACT	Eye irritant, dizzy, headache, naus.	CNS, Liver, Kidney
1,2-Dichloroethene	200 PPM	200 PPM	1000 PPM	NA	INHALATION INGESTION CONTACT	Eye irritant, CNS depression, organ damage	CNS, Liver, Kidney, lungs, Skin
Ethylbenzene	100 PPM	100 PPM	800 PPM	NA	INHALATION INGESTION CONTACT	Irritates eyes, skin, vomit, dermatitis, burning sensation	Eyes, Skin, Resp system, CNS
Methylene Chloride	50 PPM	25 PPM	2300 PPM (Ca)	NA	INHALATION ABSORPTION INGESTION CONTACT	Irritate Eyes, Skin, Fatigue, Naus, Weakness, Light Headedness	Eyes, Skin, CNS, CVS
Methyl Ethyl Ketone (2-Butanone)	200 PPM	200 PPM	3000 PPM	NA	INHALATION INGESTION CONTACT	Irritate Eyes, Skin, Nose, headache, dizziness, vomit	Eyes, Skin, Respiratory System, CNS
Methyl Isobutyl Ketone (Hexone)	50 PPM	100 PPM	500 PPM	NA	INHALATION INGESTION CONTACT	Irritates Eyes, skin, muc membrane, headache	Eyes, Skin, resp. sys.
Tetrachlorethene	25 PPM	25 PPM	150 PPM (Ca)	NA	INHALATION ABSORPTION INGESTION CONTACT	Irritate Eyes, Nose, Throat, Nau. Dizzy, Liver Damage	Eyes, Skin, Liver, Resp Sys. Kidneys, CNS
Toluene	100 PPM	200 PPM	500 PPM	NA	INHALATION INGESTION CONTACT	Irrt eyes, skin, vomit, dermatitis, burning sensation	Eyes, Skin, Resp system, CNS
1,1,1-Trichloroethane	350 PPM	350 PPM	2000 PPM (CA)	NA	INHALATION INGESTION CONTACT	Irritate eyes, skin, headache, CNS depress, liver damage	Eyes, Skin, CNS, CVS, Liver
1,1,2-Trichloroethane	10 PPM	10 PPM	100 PPM (CA)	NA	INHALATION ABSORPTION INGESTION CONTACT	Irritate eyes, skin, headache, CNS depress, liver damage	Eyes, Skin, CNS, Liver, Kidneys
Trichloroethene	50 PPM	100 PPM	1000 PPM (CA)	NA	INHALATION ABSORPTION INGESTION CONTACT	Irritate eyes, skin, headache, CNS depress, liver damage	Eyes, Skin, CNS, Liver, Kidneys
Vinyl Chloride	1 PPM	1 PPM	NA	NA	INHALATION CONTACT	Weak, Abdom pain, Bleeding, liver damage	Liver, CNS, Blood, resp system
Xylene (Total)	100 PPM	100 PPM	900 PPM	NA	INHALATION INGESTION CONTACT	Irrt eyes, skin, vomit, dermatitis, burning sensation	Eyes, Skin, Resp system, CNS

Contaminant	TLV	OSHA (PEL)	IDLH	Action Level	ROUTES OF ENTRY	SYMPTOMS	TARGET ORGANS
Bis (2-ethylhexyl) phthalate	5 mg/m ³	5 mg/m ³	5000 mg/m ³	NA	Inhalation, Ingestion, Contact	Irr. Eye, Mucous Mem, liver damage, teratogen	Eyes, Res Sys, liver, CNS, GI
Di-n-butyl phthalate	5 mg/m ³	5 mg/m ³	4000 mg/n ³	NA	Inhalation, Ingestion, Contact	Irr. Eye, upper Resp. stomach	Eyes, Resp sys, GI
1,2-Dichlorobenzene (o-dichlorobenzene)	25 ppm	50 ppm Ceiling	200 ppm	NA	Inhalation, Absorbtion, Ingestion, Contact	Irrt. Eyes, nose: Liver, Kidney Damage, Skin Blisters	Eyes, Skin, Resp sys, liver, kidneys
Diethyl phthalate	5 mg/m ³	None	N.D.	NA	Inhalation, Ingestion, Contact	Irr.eyes, skin, nose, throat: head diss,nausea, pain	Eyes, skin, resp sys, CNS, PNS
Isophorone	4 ppm	25 ppm	200 ppm	NA	Inhalation, Ingestion, Contact	Irr. Eyes,nose, throat; head, nau, dizz, fati, mal, narco,derm	Eyes, Skin, resp sys, CNS, liver, Kidneys
Naphthalene	10 ppm	10 ppm	250 ppm	NA	Inhalation, Absorbtion, Ingestion, Contact	Irr.Eyes, head, conf, excitement, mal, nau, ab pain, sweating, jaun, renal shutdown	Eyes, skin, blood, liver, kidneys, CNS
Phenol	5 ppm	5 ppm	250 ppm	NA	Inhalation, Absorbtion, Ingestion, Contact	Irr eyes, nose, throat, musc ache, pain dark urine, skin burns liver	Eyes, Skin, resp sys, liver, kidneys
Antimony	.5 mg/m ³	.5 mg/m ³	50 mg/m ³	NA	Inhalation, Ingestion, Contact	Irr eyes, skin, nose, throat, mouth dizz, head, nau, vomit, diarr, insom	Eyes, skin, resp sys, CVS
Arsenic	.002 mg/m ³	.01 mg/m ³	5 mg/m ³	.005 mg/m ³	Inhalation, Absorbtion, Ingestion, Contact	Ulceration nasel septum, GI dis, resp irr,	Liver, kidneys, skin, lungs,lymp sys
Barium	.5 mg/m ³	.5 mg/m ³	50 mg/m ³	NA	Inhalation, Ingestion, Contact	Irr eyes, skin, upper resp, gastroenteritis, musc spasm	Eyes, skin, resp, sys, heart, CNS
Beryllium	.0005 mg/m ³	.002 mg/m ³	4 mg/m ³	NA	Inhalation Contact	Berylliosis, chest pain, cough, clubbing of fingers, irr eyes	Eyes, skin, resp. sys
Cadmium	.01 mg/m ³	.005 mg/m ³	9 mg/m ³	.0025 mg/m ³	Inhalation Ingestion	Pulm edema, cough, chest tight, headache, chills, naus, vomit	Resp sys, kidneys, prostrate, blood
Chromium VI	.01 mg/m ³	.001 mg/m ³	250 mg/m ³	NA	Inhalation, Ingestion, Contact	Irr eyes, skin, lungs,	Eyes, skin, resp, sys.

Contaminant	TLV	OSHA (PEL)	IDLH	Action Level	ROUTES OF ENTRY	SYMPTOMS	TARGET ORGANS
Lead	.05 mg/m ³	.05 mg/m ³	100 mg/m ³	.03 mg/m ³	Inhalation Ingestion Contact	Weak, insom, facial pallor, abd pain, anemia, irr eyes	Eyes, GI tract, CNS, kidneys, blood
Magnanese	.2 mg/m ³	5 mg/m ³ (ceiling)	500 mg/m ³	NA	Inhalation Ingestion	Parkinson's, insom, confusion, metal fume fever, dry throat, edema	Resp sys, CNS, blood Kidney
Silver	.01 mg/m ³	.01 mg/m ³	10 mg/m ³	NA	Inhalation Ingestion Contact	Blue-gray eyes, nasal septum, throat, skin irr, GI	Naal septum, skin eyes
Tin	2 mg/m ³	2 mg/m ³	100 mg/m ³	NA	Inhalation Contact	Irr eyes, skin, resp sys	Eyes, skin, resp sys
Vanadium	.05 mg/m ³	.5 mg/m ³	35 mg/m ³	NA	Inhalation Ingestion Contact	Irr eye, skin, throat, grren tongue, met taate	Eyes, skin, resp sys
Zinc (Zinc Oxide)	5 mg/m ³	5 mg/m ³	500 mg/m ³	NA	Inhation	Metal fume fever, fever, met taste	Reap sys
Cyanide (Total)	5 mg/m ³	5 mg/m ³	25 mg/m ³	NA	Inhalation Absorption Ingestion Contact	Irr eyes, skin headache nau, confusion, vomit,	Eyes, skin CVS, CNS, Thyroid, blood5
Aroclor 1016	.001 mg/m ³	NK	NA	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1221	1 mg/m ³	NK	NA	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1232	1 mg/m ³	NK	NA	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1242	1 mg/m ³	1 mg/m ³	5 mg/m ³	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1248	1 mg/m ³	NK	NA	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1254	.5 mg/m ³	.5 mg/m ³	5 mg/m ³	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system
Aroclor 1260	.5 mg/m ³	NK	NA	NA	Inhalation Absorption Ingestion Contact	Irr eyes, chloracne, liver damage, repro effects	Skin, eyes, liver, repro system